### **REPORT: PERCENT OF ORDERS IN JEOPARDY**

Messurement No. 1	RESIDENTIAL		
	CLEC AGGREGATE		
REPORTING PERIOD	Total Orders in Jeopardy	% of Orders in Jeopardy	
Mar-98	NA NA	NA	
Apr-98	NA	NA NA	
May-98	6	0.14%	
Jun-98	5	0.04%	
Jul-98	5	0.04%	
Aug-98	20	0.12%	
Sep-98	27	0.18%	
Oct-98	8	0.04%	
Nov-98	4	0.01%	
Dec-98			
Average	0.06%		

Measurement No. 1	BUSINESS		
	CLEC AGGREGATE		
REPORTING PERIOD	Total Orders in Jeopardy	% of Orders in Jeopardy NA	
Mar-98	NA		
Apr-98	NA	NA	
May-98	0 0.09%		
Jun-98	1 0.07%		
Jul-98	1 0.06%		
Aug-98	1	0.07%	
Sep-98	2 0.13%		
Oct-98	2 0.18%		
Nov-98	0	0.00%	
Dec-98			

0.10%

Average
NOTE: Jeapardy not measured until May, 1998

#### **REPORT: PERCENT OF ORDERS IN JEOPARDY**

Measurement No. 1	UNBUNDLED NETWORK ELEMENTS		
	CLEC AGGREGATE		
REPORTING PERIOD	Total Orders in Jeopardy	% of Orders in Jeopardy	
Mar-98	NA NA	NA NA	
Apr-98	NA NA	NA	
May-98	NA .	NA NA	
Jun-98	NA NA		
Jul-98	NA NA	NA NA	
Aug-98	NA NA	NA NA	
Sep-98	4	2.58%	
Oct-98	2 0.97%		
Nov-98	1 0.72%		
Dec-98			
A		4 444	

Average 1.40%

Messurement No. 1	SPECIALS  CLEC AGGREGATE				
REPORTING PERIOD					
	Total Orders in Jeopardy	% of Orders in Jeopardy			
Mar-98	NA NA	NA NA			
Apr-98	NA NA	NA NA			
May-98	NA NA				
Jun-98	NA NA				
Jul-98	NA NA	NA NA			
Aug-98	0	0.00			
Sep-98	0	0.00			
Oct-98	0 0.00				
Nov-98	0				
Dec-98					

Average

NOTE: UNE and Specials not measured until September, 1998

# REPORT: PERCENT MISSED INSTALLATION APPOINTMENTS

Measurement No. 1	UNE DESIGN: DISPATCH			
	CLEC AGGREGATE			
REPORTING PERIOD	Total Missed Appts	Total Count < 10 Circuits	% Missed Due Dates	
Mar-98	0	3	0.00%	
Арг-98	0	9	0.00%	
May-98	0	12	0.00%	
Jun-98	4	16	25.00%	
Jul-98	4	55	7.30%	
Aug-98	13	57	22.80%	
Sep-98	13	64	20.30%	
Oct-98	15	93	16.13%	
Nov-98	4	62	6.45%	
Dec-98				
Average			14.29%	

Measurement No. 1	UNE DESIGN: NO-DISPATCH CLEC AGGREGATE			
REPORTING PERIOD	Total Missed Appts	Total Count < 10 Circuits	% Missed Due Dates	
Mar-98	0	Ō	0.00%	
Apr-98	0	0	0.00%	
May-98	0	0	0.00%	
Jun-98	0	0	0.00%	
Jul-98	0	0	0.00%	
Aug-98	0	0	0.00%	
Sep-98	0	0	0.00%	
Oct-98	0	0	0.00%	
Nov-98	0	0	0.00%	
Dec-98				

Average 36 of 57

# **REPORT: PERCENT MISSED INSTALLATION APPOINTMENTS**

Measurement No. 1	UNE NON - DESIGN: DISPATCH				
		CLEC AGGREGATE			
REPORTING PERIOD	Total Missed Appts	Total Count < 10 Circuits	% Missed Due Dates		
Mar-98	0	452	0.00%		
Apr-98	1	28	3.60%		
May-98	0	16	0.00%		
Jun-98	0	35	0.00%		
Jul-98	3	57	5.30%		
Aug-98	3	45	6.70%		
Sep-98	2	64	3.10%		
Oct-98	3	85	3.50%		
Nov-98	1	43	2.30%		
Dec-98					
Average	3.49%				

Measurement No. 1	UNE NON-DESIGN: NO DISPATCH				
		CLEC AGGREGATE			
REPORTING PERIOD	Total Missed Appts	Total Count < 10 Circuits	% Missed Due Dates		
Mar-98	0	9	0.00%		
Apr-98	0	1	0.00%		
May-98	0	2	0.00%		
Jun-98	0	0	0.00%		
Jul-98	0	4	0.00%		
Aug-98	0	9	0.00%		
Sep-98	0	33	0.00%		
Oct-98	5	37	13.51%		
Nov-98	1	38	2.63%		
Dec-98					

Average 37 of 57

4.51%

# REPORT: PERCENT MISSED INSTALLATION APPOINTMENTS

Measurement No. 1	UNE LOOPS WITH LNP - DISPATCH				
	CLEC AGGREGATE				
REPORTING PERIOD	Total Missed Appts Orders Completed  * Missed Due Date				
Mar-98					
Apr-98					
May-98					
Jun-98					
Jul-98					
Aug-98					
Sep-98					
Oct-98					
Nov-98					
Dec-98					

Average

Measurement No. 1	UNE LOOPS WITH LNP - NON - DISPATCH				
		CLEC /	AGGREGATE		
REPORTING PERIOD	Total Missed Appts Orders Completed  Wissed Due Dates				
Mar-98					
Apr-98					
May-98					
Jun-98					
Jul-98					
Aug-98					
Sep-98					
Oct-98					
Nov-98					
Dec-98					

Average

NOTE: Not measured

38 of 57

### **REPORT: PERCENT MISSED INSTALLATION APPOINTMENTS**

Measurement No. 1	UNE DESIGN: DISPATCH (>10 CIRCUITS)				
		CLEC AGGREGATE			
REPORTING PERIOD	Total Missed Appts  Total Count < % Missed Due 10 Circuits Dates				
Mar-98	0	0	0.00%		
Apr-98	0	1	0.00%		
May-98	0	0	0.00%		
Jun-98	0	0	0.00%		
Jul-98	0	1	0.00%		
Aug-98	0	1	0.00%		
Sep-98	0	0	0.00%		
Oct-98	0	0	0.00%		
Nov-98	0	0	0.00%		
Dec-98					

Average

Measurement No. 1	UNE DESIGN: NO-DISPATCH (>10 CIRCUITS)					
	Total	CLEC AGGREGATE				
REPORTING PERIOD	Missed Appts	Total Count < 10 Circuits	% Missed Due Dates			
Mar-98	0	Ō	0.00%			
Apr-98	0	0	0.00%			
May-98	0	0	0.00%			
Jun-98	0	0	0.00%			
Jul-98	0	0	0.00%			
Aug-98	0	0	0.00%			
Sep-98	0	0	0.00%			
Oct-98	0	0	0.00%			
Nov-98	0					
Dec-98						

Average

39 of 57

# REPORT: PERCENT MISSED INSTALLATION APPOINTMENTS

Measurement No. 1	UNE NON - DESIGN: DISPATCH (>10 CIRCUITS) CLEC AGGREGATE			
REPORTING PERIOD	Total Missed Appts	Total Count < 10 Circuits	% Missed Due Dates	
Mar-98	0	0	0.00%	
Apr-98	0	0	0.00%	
May-98	0	0	0.00%	
Jun-98	0	0	0.00%	
Jul-98	0	1	0.00%	
Aug-98	0 0 0.00%			
Sep-98	0	0	0.00%	
Oct-98	0	0	0.00%	
Nov-98	0	0	0.00%	
Dec-98				

Average

Measurement No. 1	i -	UNE NON-DESIGN: NO DISPATCH (>10 CIRCUITS)			
		CLEC AGGREG	ATE		
REPORTING PERIOD	Total Missed Appts	Total Count < 10 Circuits	% Missed Due Dates		
Mar-98	0	0	0.00%		
Apr-98	0	0	0.00%		
May-98	0	0	0.00%		
Jun-98	0	0	0.00%		
<b>Jul-98</b>	0	0	0.00%		
Aug-98	0	0	0.00%		
Sep-98	0	0	0.00%		
Oct-98	0	0	0.00%		
Nov-98	0	0	0.00%		
Dec-98					

# REPORT: PERCENT MISSED INSTALLATION APPOINTMENTS

Measurement No. 1	UNE LO	UNE LOOPS WITH LNP - DISPATCH (>10 CIRCUITS			
		CLEC AG	GREGATE		
REPORTING PERIOD	Total Missed Appts	% Missed Due Dates			
Mar-98					
Apr-98					
May-98					
Jun-98					
Jul-98					
Aug-98					
Sep-98					
Oct-98					
Nov-98					
Dec-98					

Average

Measurement No. 1		UNE LOOPS WITH LNP - NON - DISPATCH (>10 CIRCUITS)				
		CLEC AG	GREGATE			
REPORTING PERIOD	Total Missed Appts	Orders Completed	% Missed Due Dates			
Mar-98						
Apr-98						
May-98						
Jun-98						
Jul-98						
Aug-98						
Sep-98						
Oct-98						
Nov-98						
Dec-98						

Average

NOTE: Not measured 41 of 57

# LOUISIANA REPORT: PERCENT PROVISIONING TROUBLES WITHIN 30 DAYS

Measurement No. 1	UNE DESIGN: DISPATCH			
		CLEC AGGR	EGATE	
REPORTING PERIOD	Prv Trbis w/in 30 days	Total Prv Trbis	% Prv Trbis, 30 days	
Mar-98	2	4	50.00%	
Apr-98	0	4	0.00%	
May-98	0	36	0.00%	
Jun-98	2	53	3.77%	
Jui-98	7	48	14.58%	
Aug-98	25	157	15.92%	
Sep-98	13	144	9.03%	
Oct-98	8	154	5.19%	
Nov-98	14	196	7.14%	
Dec-98				

Average

8.92%

Measurement No. 1	UNE DESIGN: NO - DISPATCH			
		CLEC AGGR	EGATE	
REPORTING PERIOD	Prv Trbis w/in 30 days	Total Prv Trbis	% Prv Trbis, 30 days	
Mar-98	0	4	0.00%	
Apr-98	0	4	0.00%	
May-98	0	36	0.00%	
Jun-98	. 2	53	3.77%	
Jul-98	1	48	2.08%	
Aug-98	1	157	0.64%	
Sep-98	8	144	5.56%	
Oct-98	1	154	0.65%	
Nov-98	2	196	1.02%	
Dec-98				

Average 42 of 57

1.88%

-		
		v

# LOUISIANA REPORT: PERCENT PROVISIONING TROUBLES WITHIN 30 DAYS

CLEC AGGREGATE           REPORTING PERIOD         Prv Trbis w/in 30 days           Mar-98 Apr-98 Ap	Measurement No. 1	UNE NON - DESIGN: DISPATCH CLEC AGGREGATE			
REPORTING PERIOD         w/in 30 days         Total Prv Trbls         % Prv Trbls, 30 day           Mar-98         0         16         0.00%           Apr-98         0         454         0.00%           May-98         0         28         0.00%           Jun-98         1         29         3.45%           Jul-98         0         66         0.00%           Aug-98         3         127         2.36%           Sep-98         0         127         0.00%           Oct-98         0         136         0.00%           Nov-98         1         192         0.52%					
Apr-98       0       454       0.00%         May-98       0       28       0.00%         Jun-98       1       29       3.45%         Jul-98       0       66       0.00%         Aug-98       3       127       2.36%         Sep-98       0       127       0.00%         Oct-98       0       136       0.00%         Nov-98       1       192       0.52%		w/in 30	Total Prv Trbis	% Prv Trbis, 30 days	
May-98         0         28         0.00%           Jun-98         1         29         3.45%           Jul-98         0         66         0.00%           Aug-98         3         127         2.36%           Sep-98         0         127         0.00%           Oct-98         0         136         0.00%           Nov-98         1         192         0.52%	Mar-98	0	16	0.00%	
Jun-98         1         29         3.45%           Jul-98         0         66         0.00%           Aug-98         3         127         2.36%           Sep-98         0         127         0.00%           Oct-98         0         136         0.00%           Nov-98         1         192         0.52%	Apr-98	0	454	0.00%	
Jul-98     0     66     0.00%       Aug-98     3     127     2.36%       Sep-98     0     127     0.00%       Oct-98     0     136     0.00%       Nov-98     1     192     0.52%	May-98	0	28	0.00%	
Aug-98     3     127     2.36%       Sep-98     0     127     0.00%       Oct-98     0     136     0.00%       Nov-98     1     192     0.52%	Jun-98	1	29	3.45%	
Sep-98         0         127         0.00%           Oct-98         0         136         0.00%           Nov-98         1         192         0.52%	Jul-98	0	66	0.00%	
Oct-98         0         136         0.00%           Nov-98         1         192         0.52%	Aug-98	3	127	2.36%	
Nov-98 1 192 0.52%	Sep-98	0	127	0.00%	
	Oct-98	0	136	0.00%	
Dec-98	Nov-98	1	192	0.52%	
	Dec-98				

0.43% Average

Measurement No. 1	U	NE NON-DESIG	SN: NO DISPATCH
		CLEC AGG	REGATE
REPORTING PERIOD	Prv Trbis w/in 30 days	Total Prv Trbis	% Prv Trbis, 30 days
Mar-98	0	2	0.00%
<b>Apr-98</b>	0	8	0.00%
May-98	0	2	0.00%
Jun-98	0	2	0.00%
Jul-98	0	4	0.00%
Aug-98	0	19	0.00%
Sep-98	1	11	9.09%
Oct-98	5	46	10.87%
Nov-98	2	41	4.88%
Dec-98			

Average 43 of 57

5.93%

Laar al~1.xls % Prv Trbis,30d-UNE ND DC & NDO

REPORT: PERCENT PROVISIONING TROUBLES WITHIN 30 DAYS

Measurement No. 1	UNE	UNE DESIGN: DISPATCH (>10 CIRCUITS)			
		CLEC AG	GREGATE		
REPORTING PERIOD	Prv Trbis w/in 30 days	Total Prv Trbis	% Prv Trbls, 30 days		
Mar-98	0	0	0.00%		
Apr-98	0	0	0.00%		
May-98	0	15	0.00%		
Jun-98	0	0	0.00%		
Jul-98	0	0	0.00%		
Aug-98	0	1	0.00%		
Sep-98	0	10	0.00%		
Oct-98	0	0	0.00%		
Nov-98	0	0	0.00%		
Dec-98					

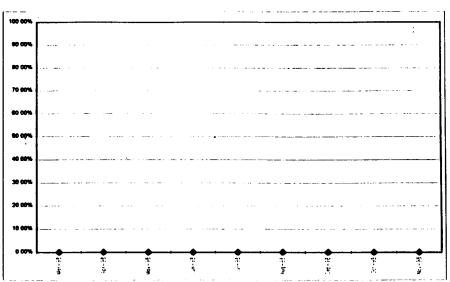
Average

Measurement No. 1	UNE DESIGN: NO - DISPATCH (>10 CIRCUITS)			
		CLEC AG	GREGATE	
REPORTING PERIOD	Prv Trbls w/in 30 days	Total Prv Trbis	% Prv Trbis, 30 days	
Mar-98	0	0	0.00%	
Apr-98	0	0	0.00%	
May-98	0	15	0.00%	
Jun-98	0	0	0.00%	
Jul-98	0	0	0.00%	
Aug-98	0	1	0.00%	
Sep-98	0	10	0.00%	
Oct-98	0	0	0.00%	
Nov-98	0	0	0.00%	
Dec-98				

Average 45 of 57

### **REPORT: PERCENT PROVISIONING TROUBLES WITHIN 30 DAYS**

Measurement No. 1	UN	UNE NON - DESIGN: DISPATCH			
		CLEC AGG	REGATE		
REPORTING PERIOD	Prv Trbis w/in 30 days	Total Prv Trbis	% Prv Trbis, 30 days		
Mar-98	0	0	0.00%		
Apr-98	0	0	0.00%		
May-98	0	1	0.00%		
Jun-98	0	0	0.00%		
Jul-98 ·	0	0	0.00%		
Aug-98	0	2	0.00%		
Sep-98	0	1	0.00%		
Oct-98	0	0	0.00%		
Nov-98	0	0	0.00%		
Dec-98					



Average

Measurement No. 1	UNE NON-DESIGN: NO DISPATCH					
		CLEC AGG	REGATE			
REPORTING PERIOD	Prv Trbls w/in 30 days	Total Prv Trbis	% Prv Trbls, 30 days			
Маг-98	0	0	0.00%			
Apr-98	0	0	0.00%			
May-98	0	0	0.00%			
Jun-98	0	0	0.00%			
Jul-98	0	0	0.00%			
Aug-98	0	0	0.00%			
Sep-98	0	0	0.00%			
Oct-98	0	0	0.00%			
Nov-98	0	0	0.00%			
Dec-98						

Average

# REPORT: PERCENT PROVISIONING TROUBLES WITHIN 30 DAYS

Measurement No. 1	UN	UNE LOOPS WITH LNP: DISPATCH					
		CLEC AGG	REGATE				
REPORTING PERIOD	Prv Trbis w/in 30 days	Total Prv Trbis	% Prv Trbis, 30 days				
Mar-98							
Apr-98							
May-98							
Jun-98							
Jul-98			,				
Aug-98							
Sep-98							
Oct-98							
Nov-98							
Dec-98							

Average

Measurement No. 1	U	UNE LOOPS WITH LNP: NO DISPATCH					
		CLEC AGO	REGATE				
REPORTING PERIOD	Prv Trbis w/in 30 days	Total Prv Trbis	% Prv Trbis, 30 days				
Mar-98							
Арг-98	·						
May-98							
Jun-98							
Jul-98							
Aug-98							
Sep-98							
Oct-98							
Nov-98							
Dec-98							

Average

NOTE: Not measured

47 of 57

Laan 31~1.xls % Prv Trbis30dUNE LNP DON:00 >10

# **REPORT: PERCENT MISSED REPAIR APPOINTMENTS**

Measurement No. 1	UNE - DESIGN: DISPATCH			
	CL	EC AGGREGA	\TE	
REPORTING PERIOD	Number of Missed Due Dates	Number of Trouble Reports	% Missed Due Dates	
Mar-98	NA NA	NA	NA NA	
Apr-98	NA	NA	NA NA	
May-98	NA	NA	NA NA	
Jun-98	NA	NA	NA NA	
Jul-98	NA	NA	NA NA	
Aug-98	2	37	5.41%	
Sep-98	1	22	4.55%	
Oct-98	0	22	0.00%	
Nov-98	6	26	23.08%	
Dec-98				

2.80% Average

Measurement No. 1	UNE - DESIGN: NO DISPATCH				
	CLEC AGGREGATE				
REPORTING PERIOD	Number of Missed Due Dates	Number of Trouble Reports	% Missed Due Dates		
Mar-98	NA	NA	NA NA		
Apr-98	NA	NA	NA		
May-98	NA	NA	NA		
Jun-98	NA	NA	NA		
Jul-98	NA	NA	NA		
Aug-98	0	14	0.00%		
Sep-98	0	5	0.00%		
Oct-98	1	3	33.33%		
Nov-98	0	1	0.00%		
Dec-98					

4.35%

Average NOTE: Not measured until August 48 of 57

Laanal~1.xls % MRA - UNE DES DO & NDO

# **REPORT: PERCENT MISSED REPAIR APPOINTMENTS**

Measurement No. 1	UNE NON - DESIGN: DISPATCH				
	CLEC AGGREGATE				
REPORTING PERIOD	Number of Missed Due Dates	Number of Trouble Reports	% Missed Due Dates		
Mar-98	0	0	0.00%		
Apr-98	0	0	0.00%		
May-98	0	2	0.00%		
Jun-98	1	1	100.00%		
Jul-98	2	9	22.22%		
Aug-98	0	1	0.00%		
Sep-98	0	1	0.00%		
Oct-98	6	8	75.00%		
Nov-98	0	4	0.00%		
Dec-98					

Average 34.62%

Measurement No. 1	UNE NON-DESIGN: NO DISPATCH				
	CLEC AGGREGATE				
REPORTING PERIOD	Number of Missed Due Dates	Number of Trouble Reports	% Missed Due Dates		
Маг-98	0	0	0.00%		
Apr-98	0	0	0.00%		
May-98	0	1	0.00%		
Jun-98	0	1	0.00%		
Jul-98	1	9	11.11%		
Aug-98	3	3	100.00%		
Sep-98	0	2	0.00%		
Oct-98	5	6	83.33%		
Nov-98	9	13	69.23%		
Dec-98					

Average 49 of 57 51.43%

# REPORT: PERCENT REPEAT TROUBLES W/I 30 DAYS

Messurement No. 1	UNE DESIGN: DISPATCH					
	CLEC AGGREGATE					
REPORTING PERIOD	Number of Repeat Troubles w/in 30 days	Number of Troubles	% Repeat Troubles w/in 30 days			
Mar-98	0	1	0.00%			
Apr-98	0	2	0.00%			
May-98	0	1	0.00%			
Jun-98	2	9	22.22%			
Jul-98	2	20	10.00%			
Aug-98	1	37	2.70%			
Sep-98	1	22	4.55%			
Oct-98	2	22	9.09%			
Nov-98	2	26	7.69%			
Dec-98						

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_	v	v	•	ъ.	•	

7.14%

Messurement No. 1	UNE DESIGN: NO - DISPATCH						
	CL	EC AGGREG	ATE				
REPORTING PERIOD	Number of Repeat Troubles w/in 30 days	Number of Troubles	% Repeat Troubles w/in 30 days				
Mar-98	0	0	0.00%				
Apr-98	0	0	0.00%				
May-98	0	0	0.00%				
Jun-98	0	2	0.00%				
Jul-98	0	0	0.00%				
Aug-98	2	14	14.29%				
Sep-98	0	5	0.00%				
Oct-98	0	3	0.00%				
Nov-98	0	0 1 0.00%					
Dec-98							

# **REPORT: PERCENT REPEAT TROUBLES W/I 30 DAYS**

Measurement No. 1	UNE NON-DESIGN: DISPATCH					
	C	CLEC AGGREGATE				
REPORTING PERIOD	Number of Repeat Troubles win 30 days	Number of Troubles	% Repeat Troubles wiin 30 days			
Mar-98	0	0	0.00%			
Apr-98	0	0	0.00%			
May-98	1	2	50.00%			
Jun-96	1	1	100.00%			
Jul-98	2	9	22.22%			
Aug-98	0	1	0.00%			
Sep-98	0	1	0.00%			
Oct-98	2	8	25.00%			
Nov-98	0	4	0.00%			
Dec-98						
			00 000/			

Average 23.08%

Messurement No. 1	UNE NON-E	ESIGN:	N	O - DISPATCH		
REPORTING PERIOD	С	CLEC AGGREGATE				
	Number of Repeat Troubles win 30 days		of	% Repeat Troubles w/in 30 days		
Mar-98	0	0		0.00%		
Apr-98	0	0		0.00%		
May-98	Ō	1		0.00%		
Jun-98	0	1		0.00%		
Jul-98	1	9		11.11%		
Aug-98	0	3		0.00%		
Sep-98	1	2		50.00%		
Oct-98	0	6		0.00%		
Nov-98	0	13		0.00%		
Dec-98						
Average				5.71%		

# REPORT: CUSTOMER TROUBLE REPORT RATE

Measurement No. 1	UNE DESIGN: DISPATCH					
	CLEC AGGREGATE					
REPORTING PERIOD	Number of Number of % Trouble Report Rate					
Mar-98	14	2	14.29%			
Apr-98	66	1	1.52%			
May-98	118	3	2.54%			
Jun-98	149	9	6.04%			
Jul-98	298	20	6.71%			
Aug-98	437	37	8.47%			
Sep-98	598	22	3.68%			
Oct-98	805	22	2.73%			
Nov-98	946	26	2.75%			
Dec-98						

Average

4.14%

Measurement No. 1	UNE DE	SIGN: NO -	DISPATCH
		CLEC AGGREC	SATE
REPORTING PERIOD	Number of Lines	f Number of Troubles	% Trouble Report Rate
Маг-98	14	0	0.00%
Apr-98	66	0	0.00%
May-98	118	1	0.85%
Jun-98	149	2	1.34%
Jul-98	298	0	0.00%
Aug-98	437	14	3.20%
Sep-98	598	5	0.84%
Oct-98	805	3	0.37%
Nov-98	946	1	0.11%
Dec-98			

Average

0.76%

# REPORT: CUSTOMER TROUBLE REPORT RATE

Measurement No. 1	UNE NON - DESIGN: DISPATCH			
	C	LEC AGGRE	GATE	
REPORTING PERIOD	Number of Lines	Number of Troubles	% Trouble Report Rate	
Mar-98	344	0	0.00%	
Apr-98	233	0	0.00%	
May-98	344	2	0.58%	
Jun-98	392	1	0.26%	
Jul-98	563	9	1.60%	
Aug-98	695	1	0.14%	
Sep-98	745	1	0.13%	
Oct-98	2883	8	0.28%	
Nov-98	3031	4	0.13%	
Dec-98			0.004	

Average 0.28%

Measurement No. 1	UNE NON	-DESIGN: N	O DISPATCH
	C	LEC AGGRE	GATE
REPORTING PERIOD	Number of Lines	Number of Troubles	% Trouble Report Rate
Mar-98	344	0	0.00%
Apr-98	233	0	0.00%
May-98	344	1	0.29%
Jun-98	392	1	0.26%
Jul-98	563	9	1.60%
Aug-98	695	3	0.43%
Sep-98	745	2	0.27%
Oct-98	2883	6	0.21%
Nov-98	3031	13	0.43%
Dec-98			

Average 0.38%

# **REPORT: MAINTENANCE AVERAGE DURATION**

(Receipt to Clear)

Measurement No. 1	UNE DESIGN: DISPATCH		
	CL	EC AGGREGA	TE
REPORTING PERIOD	Number of Mtce Hours	Number of Troubles	Mtce Avg Duration
Mar-98	8.73	2	4.37
Apr-98	25.80	1	25.80
May-98	103.78	3	34.59
Jun-98	101.23	9	11.25
Jul-98	465.17	20	23.26
Aug-98	555.23	37	15.01
Sep-98	206.15	22	9.37
Oct-98	148.50	22	6.75
Nov-98	392.50	26	15.10
Dec-98			

Average

16.17

Measurement No. 1	UNE DESIGN: NO - DISPATCH		
	CL	EC AGGREGA	TE
REPORTING PERIOD	Number of Mtce Hours	Number of Troubles	Mtce Avg Duration
Mar-98	0.00	0	0.00
Apr-98	0.00	0	0.00
May-98	86.07	1	86.07
Jun-98	38.40	2	19.20
Jul-98	0.00	0	0.00
Aug-98	33.75	14	2.41
Sep-98	45.68	5	9.14
Oct-98	93.98	3	31.33
Nov-98	0.03	1	0.03
Dec-98			

Average

16.46

# REPORT: MAINTENANCE AVERAGE DURATION

(Receipt to Clear)

Measurement No. 1	UNE NON - DESIGN: DISPATCH		
	CL	EC AGGREGA	TE
REPORTING PERIOD	Number of Mtce Hours	Number of Troubles	Mtce Avg Duration
Mar-98	0.00	0	0.00
Apr-98	0.00	0	0.00
May-98	21.88	2	10.94
Jun-98	0.00	0	0.00
Jul-98	96.63	9	10.74
Aug-98	75.63	1	75.63
Sep-98	19.88	1	19.88
Oct-98	408.98	8	51.12
Nov-98	8.73	4	2.18
Dec-98			

Average

18.94

Measurement No. 1	UNE NON - DESIGN: NO DISPATCH		
	CL	EC AGGREGA	TE
REPORTING PERIOD	Number of Mtce Hours	Number of Troubles	Mtce Avg Duration
Mar-98	0.00	0	0.00
Apr-98	0.00	0	0.00
May-98	22.33	1	22.33
Jun-98	0.08	1	0.08
Jul-98	155.62	9	17.29
Aug-98	178.60	3	59.53
Sep-98	17.23	2	8.62
Oct-98	408.10	6	68.02
Nov-98	655.50	13	50.42
Dec-98			

Average

25.14

# **REPORT: PERCENT OUT OF SERVICE > 24 HOURS**

(Receipt to Clear)

Measurement No. 1	UNE	UNE DESIGN: DISPATCH *			
		CLEC AGGREGA	\TE		
REPORTING PERIOD	OOS > 24	TOTAL OOS	% OOS > 24 Hrs		
Mar-98	NA	NA	NA		
Арг-98	NA	NA	NA		
May-98	NA	NA	NA		
Jun-98	NA	NA	NA		
Jul-98	6	20	30.00%		
Aug-98	2	37	5.41%		
Sep-98	1	22	4.55%		
Oct-98	0	22	0.00%		
Nov-98	6	26	23.08%		
Dec-98					

Average

11.81%

<sup>\* -</sup> Not measured for OOS>24 until 7/98

Measurement No. 1	UNE DESIGN: NO - DISPATCH *		
		CLEC AGGREGA	\TE
REPORTING PERIOD	OOS > 24	TOTAL OOS	% OOS > 24 Hrs
Mar-98	NA	NA	NA
Арг-98	NA	NA	NA
May-98	NA	NA	NA
Jun-98	NA	NA	NA
Jul-98	0	0	0.00%
Aug-98	0	14	0.00%
Sep-98	0	5	0.00%
Oct-98	1	3	33.33%
Nov-98	0	1	0.00%
Dec-98			

Average

4.35%

# **REPORT: PERCENT OUT OF SERVICE > 24 HOURS**

(Receipt to Clear)

Measurement No.		-DESIGN: DISI	PATCH
		CLEC AGGREGA	TE
REPORTING PERIOD	OOS > 24	TOTAL OOS	% OOS > 24 Hrs
Mar-98	0	0	0.00%
Apr-98	0	0	0.00%
May-98	0	2	0.00%
Jun-98	0	0	0.00%
Jul-98	1	5	20.00%
Aug-98	0	0	0.00%
Sep-98	0	0	0.00%
Oct-98	6	8	75.00%
Nov-98	0	4	0.00%
Dec-98			1 2000

Average

36.84%

Measurement No. 1		-DESIGN: NO	DISPATCH
		CLEC AGGREGA	\TE
REPORTING PERIOD	OOS > 24	TOTAL OOS	% OOS > 24 Hrs
Mar-98	0	0	0.00%
Apr-98	0	0	0.00%
May-98	0	1	0.00%
Jun-98	· 0	1	0.00%
Jul-98	0	0	0.00%
Aug-98	2	2	100.00%
Sep-98	0	1	0.00%
Oct-98	0	2	0.00%
Nov-98	3	6	50.00%
Dec-98			

Average 57 of 57

38.46%

Laanai~1.xls OOS > 24 Hrs - UNE ND DO & NDO

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# **BellSouth Surrogate Measurement\***

#### Firm Order Confirmation (FOC) -Surrogate Retail Analogue\*

For CLECs, an FOC is issued when a clean local service request is processed and an order is submitted and accepted in SOCS. If the request is submitted mechanically via LENS, EDI or TAG, the FOC is automatically returned to the CLEC. When the request is manual, the BST Service Representative processes the request, issues the order and sends an FOC on line via LeapFax.

BellSouth is unable to capture the history data to produce a BellSouth Surrogate Measurement for FOC today because the information is not retained permanently in our systems. BST Service Representatives use several systems (RNS - Regional Negotiation System, DOE - Direct Order Entry and SONGS - Service Order Negotiation Generating System) to input service orders which are processed through the Service Order Communication System (SOCS). The systems are currently being upgraded to capture the required information. The estimated delivery date is 2Q99. Once these system upgrades are in place and a date and time stamp can be captured, BellSouth will be able to determine when an order is initiated into one of the systems (RNS, DOE, SONGS) and when it is accepted by SOCS. This will allow a measurement to be produced that is similar to an FOC for a CLEC.

\* There is no retail equivalent to a FOC. BellSouth has been directed by the LPSC to look for benchmarks useful in making comparisons and evaluating our performance in terms of non-discrimination. Pursuant to that directive, BellSouth is undertaking modifications to its retail ordering systems to record date and time stamps in the appropriate places in the systems as described in the text. When these are in place, BellSouth proposes to use them as a surrogate for the retail analogue of this measurement. In the interim, BellSouth proposes to use the average data.

#### Proposed BellSouth Analogs

#### Jeopardy Notification - New Retail Analogue\*

BellSouth has been providing a manual Jeopardy Notification report each month based on a written log maintained in the LCSC for CLEC orders. This report measures the notification interval on all CLEC orders including non-mechanized that were advised of a possible jeopardy to their commitment date. A new process was implemented on December 19, 1998, which will release a notice to the CLEC when the status of an order changes. BellSouth is in the process of developing the necessary software to produce a mechanized jeopardy notification report for CLEC mechanized orders and all BellSouth orders using this new process. BellSouth will be able to measure the time between status changes in the mechanized service order and the time the notice is delivered electronically to the CLEC. This new process will also measure the same information for BellSouth orders, thus providing the necessary data for a proposed BellSouth analog report. For BellSouth retail, a report must be requested by either the Consumer group or the WMC (Work Management Center).

As indicated above, at this time BellSouth is unable to capture the history data or time stamp it on a daily basis for retail orders because the information is not retained permanently in our systems. The systems are currently being upgraded

to capture this information and time stamp it. The estimated delivery date for these system updates is 2Q99.

\* There is no retail equivalent for a Jeopardy Notification Interval. BellSouth has been directed by the LPSC to look for benchmarks useful in making comparisons and evaluating our performance in terms of non-discrimination. Pursuant to that directive, BellSouth is undertaking modifications to its retail ordering systems to record date and time stamps in the appropriate places in the systems as described in the text. When these are in place, BellSouth proposes to use them as a surrogate for the retail analogue of this measurement. In the interim, BellSouth proposes to use the average data.

BellSouth Surrogate Retail Analogue for Rejects\*

Reject measurements for CLECs include the percent of total orders which do not flow-through and the average reject time from receipt of service order request to the time the request was rejected. Mechanized results are based on actual data for all orders from the Operating Support Systems (OSS). During the Negotiation Process for BST Retail services, service representatives input the data into the Regional Negotiation System (RNS). BST service representatives do not have a Pre-Ordering process to validate information prior to issuance of an order into RNS. The actual negotiation of the order includes validation of information as the order is processed through the legacy systems. There are edits and queries built into the legacy systems as they are accessed so that invalid and / or incorrect information is not accepted on the service order. The data is edited on line and those types of gueries are resolved immediately. When the negotiation process is complete, the order is generated and the data released to Service Order Communication System (SOCS). When SOCS receives the data it becomes a service order and an order number is assigned. At this point, the service order is edited by Service Order Error Resolution (SOER) before it flows to downstream systems for provisioning. Should an error occur at this point in the process, it would not flow downstream for provisioning. This could be considered a surrogate analog measurement for Rejects. At this time we are unable to capture the data on a daily basis to provide this measurement for BST. Estimated delivery date is 2Q99.

\* There is no retail equivalent to a FOC. BellSouth has been directed by the LPSC to look for benchmarks useful in making comparisons and evaluating our performance in terms of non-discrimination. Pursuant to that directive, BellSouth is undertaking modifications to its retail ordering systems to record date and time stamps in the appropriate places in the systems as described in the text. When these are in place, BellSouth proposes to use them as a surrogate for the retail analogue of this measurement. In the interim, BellSouth proposes to use the average data.

#### Proposed BellSouth Analog\*

#### Average Completion Notice Interval - Surrogate Retail Analogue

CLECs that subscribe to and use the Electronic Systems currently receive completion notices for their service orders. The completion notice interval is the time from when a service order is completed by either a field technician, dispatch assistant, or by electronic processes, until the completion notice is sent electronically to the CLEC. For BellSouth service orders, the systems are electronically updated to post the order as complete. The proposed surrogate for a retail analogue will measure the time from when the service order is completed until these systems are updated to show the order as complete.

At this time BellSouth is unable to capture the history data or time stamp on a daily basis for retail orders because the information is not retained permanently in our systems. The systems are currently being upgraded to capture this information and add a time stamp. The estimated delivery date for these system updates is 2Q99.

<sup>\*</sup> There is no retail equivalent for a Completion Notice Interval. BellSouth has been directed by the LPSC to look for benchmarks useful in making comparisons and evaluating our performance in terms of non-discrimination. Pursuant to that directive, BellSouth is undertaking modifications to its retail ordering systems to record date and time stamps in the appropriate places in the systems as described in the text. When these are in place, BellSouth proposes to use them as a surrogate for the retail analogue of this measurement. In the interim, BellSouth proposes to use the average data.

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### **UNE PROVISIONING TARGET INTERVALS**

The UNE product teams provide the development process for the UNE Provisioning Target intervals. The product teams are comprised of subject matter experts representing all aspects of the BellSouth provisioning processes. The product teams analyze the specified UNE product or service with the associated attributes to develop the ordering and provisioning processes. The team also develops a Technical Service Description (TSD) associated with each product. The TSD identifies the technical requirements necessary to provide the UNE service to the CLEC. From this data the product team SME's develops the provisioning processes and performs end to end provisioning process testing. The UNE service intervals are determined by each team based on the developed UNE provisioning processes and the results of the end to end testing. The product teams will also compare existing process intervals for similar services, where possible, to assist in determining a deliverable product or service interval. The Product Manager and team approve the product processes and the service is made available for service to CLEC customers. The UNE provisioning target intervals are then documented in the BellSouth Products and Services Interval Guide on the BellSouth Interconnection WEB sire.

	The state of the s	1 11 11		
2/13/2012	10 11 11 11 11 11 11 11 11 11 11 11 11 1	Value of the State		a subsect our
ili was e sa a s	2 Wire analog voice grade loop	1 - 5	7	2
	(SL1 & SL2)	6 - 14	10	3
	(361 & 362)	15 +	ICB	
	4 Wire analog voice grade loop	1 - 5	7	2
		6 - 14	10	3
		15 +	ICB	
	4 Wire DS1 & PRI digital loop	1 - 5	7	2
		6 - 14	10	3
	2 LAR 1894 1 A. HI I	15 + 1 - B	ICB	
	2 Wire ISDN digital loop	6-14	6	2 2
		15+	lCII	
	4 Wire 56 or 64 Kbps digital loop	1-5	7	2
		6-14	10	3
		15+	ICB	
	ADSL - 2 Wire asymmetrical digital subscriber	1-5	e de la companya della companya della companya de la companya della companya dell	2
	line loop*	8.14	10	3
		150	<b>. 199</b>	
	HDSL - 2 wire & 4 wire high bit rate digital	1-5	5 . S. <b>J</b> . (1987)	2
	subscriber line loop*	6 - 14	10	3
		15*		76
	STATE OF THE PROPERTY OF THE PARTY OF THE PA			
	Loop charmelization system <sup>a</sup>	1	<b>35</b>	15
	Central Office Channel Interfaces 2Wire	1	39	7
	Central Office Channel Interfaces 4 Wire	1	30	7 💃
	SUBJECTORS (CURIOS PROC) - ASSESS - AND			
	Loop Feeder	1	30	7
	Loop Concentration (dependent on	1	30-00	15
	equipment and right of way)?			
			•	<i>(</i>
	NID TO NID Cross Connect 2 wire	1 - 14 15 +	7 ICB	2
	NID To NID Cross Connect 4 wire	1 - 14	7	2
	1115 10 1115 01033 00/1100( 4 1/110	15+	ıĊB	2
	NID Spare Capacity	1 - 14	7	2
	· · · · · · · · · · · · · · · · · · ·	15+	ICB	
	OPEN AIN (OAIN)			
	OAIN tool kit	1	45	10
	OAIN service management system	1	45	10
	CCST BRINALING TRANSPORT SERVICE	4		42
	A-Link Signaling D-Link Signaling	1	60 60	12 12
	STP - Signaling Transfer Point	1	60	12
	UNDURBLED DITEROFFICE TRANSPORT			
	Interoffice Transport Analog line grade	1	30	7
	Interoffice Transport DSO	1	30	7
	Interoffice Transport DS1	1	30	7
	Interoffice Transport DS3	1	30	7
		1	30	7
	Dedicated 2 wire voice grade			
	Dedicated 4 wire voice grade	1	30	7
•	Dedicated 4 wire voice grade Local channel dedicated DS1	1 1	30	7
•	Dedicated 4 wire voice grade Local channel dedicated DS1 Dark Fiber	1	30 ICB	7 NA
•	Dedicated 4 wire voice grade Local channel dedicated DS1 Dark Fiber OCEANS DA LINES (1985)	1	30 ICB	7 NA
	Dedicated 4 wire voice grade Local channel dedicated DS1 Dark Fiber Os ANS DA LINE Operator Call Processing - OPCH, FACH,	1	30 ICB	7 NA
•	Dedicated 4 wire voice grade Local channel dedicated DS1 Dark Fiber OW AND DA LINE Operator Call Processing - OPCH, FACH, BLV, EI, ECT		30 ICB 30	7 NA
•	Dedicated 4 wire voice grade Local channel dedicated DS1 Dark Fiber Off AND DA LINE Operator Call Processing - OPCH, FACH, BLV, EI, ECT Operator Call Processing - Facility Based	1 1	30 ICB	7 NA 7
•	Dedicated 4 wire voice grade Local channel dedicated DS1 Dark Fiber OW AND DA LINE Operator Call Processing - OPCH, FACH, BLV, EI, ECT		30 ICB 30	7 NA 7
•	Dedicated 4 wire voice grade Local channel dedicated DS1 Dark Fiber Off AND DA INC. Operator Call Processing - OPCH, FACH, BLV, EI, ECT Operator Call Processing - Facility Based OPCH, FACH, ECT	1	30 ICB 30 30	7 NA 7
	Dedicated 4 wire voice grade Local channel dedicated DS1 Dark Fiber Off ANS DA LINE Operator Call Processing - OPCH, FACH, BLV, EI, ECT Operator Call Processing - Facility Based OPCH, FACH, ECT Operator Call Processing - Facility Based BLV, EI Jamend Operator Services	1	30 ICB 30 30 30	7 NA 7 7 7
	Dedicated 4 wire voice grade Local channel dedicated DS1 Dark Fiber Off-AHS DA LINE Operator Call Processing - OPCH, FACH, BLV, EI, ECT Operator Call Processing - Facility Based OPCH, FACH, ECT Operator Call Processing - Facility Based BLV, EI	1	30 ICB 30 30 30	7 NA 7 7
	Dedicated 4 wire voice grade Local channel dedicated DS1 Dark Fiber OF ARS DA LES Operator Call Processing - OPCH, FACH, BLV, EI, ECT Operator Call Processing - Facility Based OPCH, FACH, ECT Operator Call Processing - Facility Based BLV, EI Inward Operator Services Directory Assistance Access Service (DAAS)	1	30 ICB 30 30 30 30 30	7 NA 7 7 7
	Dedicated 4 wire voice grade Local channel dedicated DS1 Dark Fiber Off ANS DA LINE Operator Call Processing - OPCH, FACH, BLV, EI, ECT Operator Call Processing - Facility Based OPCH, FACH, ECT Operator Call Processing - Facility Based BLV, EI Jamend Operator Services	1	30 ICB 30 30 30	7 NA 7 7 7

Company of	TO STATE		
Directory Assistance Number Services	1	30	7
Intercept (DANSI)			
Directory Assistance Transport	1	30	7
Directory Assistance Database Service	1	30	7
(DADS)			
Direct Access to DA service (DADAS)	1	30	7
**************************************	e Routing - LCC		
1 - 5 LCC	1 - 5	30	7
6 - 25 LCC	6 - 25	60	15
> 25 LCC	25 +	ICB	

Revision Date: 12-17-98

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A STATE OF THE STA	Spirit !		
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2Wire analog line port	1 - 10	3	2
	11 - 25	4	2
	25 +	IC8	
Hunting	1	5	2
2 Wire analog DID trunk port	1 - 10	5	2
	11 - 25	6	2,
	25 +	ICB	
2 Wire ISDN digital line side port	1 - 10	5	2
	11 -25	6	2
	25 +	ICB	
4 Wire ISDN DSI digital trunk port	1 - 10	5	2
	11 - 25	6	2
	25 +	ICB	
Switching functionality	1	5	2
Unbundled Local Usage (entire local calling area)	1	5	2
UNIQUIOLED ACCESS TO OSS	77.6		
Preorder	1	30	7
Order/Provisioning	1	30	7
Maintenance/repair	1	30	7
ACCESS TO DATABASES			
800 Database	1	10	3
Line Information Database (LIDB)	11	30	7
niterm number portability ==			
RCF - Remote Call Forwarding	1 - 25	5~	2
	26 - 50	7	2
	51 +	ICB	
DID - Direct Inward Dial			
Initial request - trunk group to be established	Initial	30	7
Subsequent request - trunk group in place	1 -100	5	2
	100+	ICB	
LOCAL NUMBER PORTABILITY	1-50	5**	1-2*** or Varies**
	51+	ICB	
PHYSICAL COLLOCATION			
Ordinary	1-5	120	NA NA
•	6+	ICB	NA
Extraordinary	1-5	180	NA
·	6+	ICB	NA
VIRTUAL COLLOCATION			
Ordinary	1-5	90	NA
•	6+	ICB	NA
Extraordinary	1-5	120	NA
	6+	ICB	NA.

<sup>\*</sup> Service Inquiry Required

Additional Products/services

Changes to original

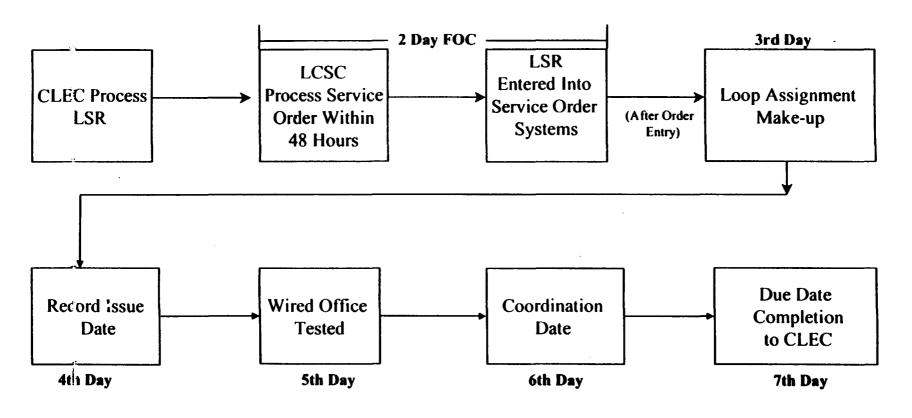
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<sup>\*\*</sup> For complex services the targeted installation interval is 7

<sup>\*\*\* 24</sup> hours assumes receipt of a clean, electronic, and accurate order for POTS and 48 hours assumes manual receipt of POTS

<sup>\*\*\*\*</sup>For complex service, the FOC is the same as the FOC interval for the service being disconnected.

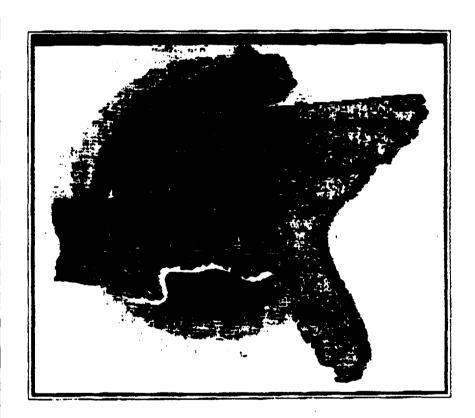
# **Unbundled Voice Loop Order/Provisioning Process**



TR 73600 ISSUE B

June 1998

# **BELLSOUTH**°



Unbundled Local Loop Technical Specifications

> Technical Reference

1373600 155UE B

#### NOTICE

This Technical Reference describes Unbuilded Local Loops provided by BellSouth Telecommunications (BST), Inc. An Unbuilded Local Loop provides a transmission path between a BST contral office and an end-user location. This document describes the signals as they appear at the associated interfaces. It als describes some aspects of the performance of the channel.

BST reserves the right to revise this document for any reason, including but not limited to conformity with standards promulgated by various governmental or regulatory agencies, utilization of advances in the state of the technical arts, or the reflection of changes in the design of any equipment, techniques, or procedures described or referred to herein. Liability to anyone arising out of use or reliance upon any information set forth herein is expressly disclaimed, and no representations or warranties, expressed or implied, are made with respect to the accuracy or utility of any information set forth herein.

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If further information is required, please contact:

Director — Transport Systems Engineering BellSouth Telecommunications, Inc. 3535 Colonnade Parkway — Room W1F1 Birmingham, AL 35243

TR 73600

# UNBUNDLED LOCAL LOOP - TECHNICAL SPECIFICATIONS

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# UNBUNDLED LOCAL LOOP - TECHNICAL SPECIFICATIONS

#### 1. General

#### 1.1 Scope

This document provides the technical specifications for the Unbundled Local Loops offered by BellSouth Telecommunications (BST). Unbundled Local Loops enables an Competitive Local Exchange Carrier (CLEC) to provide services to an end-user location. While Unbundled Local Loops supporting a wide variety of signaling schemes are available, the widespread use of Digital Loop Carrier (DLC) in the BST network requires that a particular signaling scheme be specified when an Unbundled Local Loop is ordered.

### 1.2 Availability

Unbundled Local Loops are provided subject to availability on a first-come first-served basis.

#### 1.3 Revisions

This revision is issued to: (1) change the name of Analog Unbundled Loop with Specified Signaling to Designed Unbundled Voice Loop, (2) provide updated information on Asymmetric Digital Subscriber Line (ADSL) applications on Basic Unbundled Loops,(3) remove footnote which suggests that BST transmission equipment will be included to maintain a specified loss on long Designed Unbundled Voice Loops, (4) add footnote which specifies that insertion loss on voice loops may be as high as 15dB, and (5) update power spectral density limits for Digital Unbundled Loops which support High—Bit—Rate Digital Subscriber Line (HDSL) Transport.

### 2. References

The following documents are referenced:

- (1) ANSI TI 401-1993, Telecommunications Interface Between Carriers and Customer Installations Analog Voicegrade Switched Access Lines Using Loop-Stan and Ground-Stan Signaling
- (2) ANSI T1.405-1996, Telecommunications Interface Between Carriers and Customer Installation Interfaces, Direct-Inward-Dialing Analog Voicegrade Switched Access Using Loop Reverse-Battery Signaling
- (3) ANSI T1.407-1990, Telecommunications Interfuce Between Carriers and Customer Installations Analog Voicegrade Special Access Lines Using Customer-Installation-Provided Loop-Start Supervision
- (4) ANSI T1.410-1992, Telecommunications Carrier-to-Customer Metallic Interface Digital Data at 64 kbit/s and Subrutes
- (5) ANSI T1.413 1995, Telecommunications Network and Customer Installation Interfaces Asymmetric Digital Subscriber Line (ADSL) Metallic Interface

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- (6) ANSI T1.601 1992, Telecommunications ISDN Basic Access Interface for use on Metallic Loops for Application on the Network Side of the NT
- (7) ANSI/IEEE 455-1985, Standard Test Procedure for Measuring Longitudinal Bulance of Telephone Equipment Operating in the Voice Band
- (8) ANSI/IEEE 743-1995, Standard Equipment Requirements and Measurement Techniques for Analog Transmission Parameters for Telecommunications
- (9) Committee T1 Technical Report No. 28, A Technical Report on High-Bit-Rate Digital Subscriber Lines
- (10) Bellcore TA-TSY-000077, Digital Channel Banks Requirements for Dataport Channel Unit Functions
- (11) Belicore SR-TSV-002275, BOC Notes on the LEC Networks 1994

#### 3. Overview

### 3.1 Loop Topology

Unbundled Local Loops extend from the Main Distributing Frame (MDF) in BST's Central Office (CO) to the End User Interface. They may be composed in either of the following arrangements:

- untirely of paired metallic conductors, or
- the concatenation of a universal DLC channel with paired metallic conductors.

#### 3.2 Digital Loop Carrier

The use of DLC brings up the following two considerations.

- Some technologies, such as High Bit-rate Digital Subscriber Line (HDSL), cannot be transported via DLC due to the bandwidth employed. When a customer is served by DLC, an Unbundled Local Loop providing such a wide bandwidth will not typically be available.
- Many dedicated voiceband circuits employ signaling that requires unique DLC line cards.

#### 3.3 Inductive Loading

Of the loops employing only metallic facilities, a significant percentage are loaded. Loading involves the placement of inductors, typically every 6000 feet, in the loop. These inductors introduce intolerable attenuation at frequencies above the voicehand, again making wide bandwidth services unavailable.

#### 3.4 Types of Unbundled Local Loops

Due to the above considerations, a number of types of Unbundled Local Loops have been developed in order to simplify the ordering and provisioning process. The different types of loops can be placed into the following categories:

- Basic Unbundled Loop
- Designed Unbundled Voice Loop
- Digital Unbundled Loop

The most prevalent means of voiceband exchange access involves a loop-start interface, with the exchange carrier providing the battery feed. Because this arrangement is widely used, Unbundled Local Loops supporting such signaling have been assigned a unique category, denoted the Basic Unbundled Loop.

A Designed Unbundled Voice Loop provides a two-wire or four-wire voiceband transmission channel with various signaling options.

The Digital Unbundled Loop provides a channel that can support one of a described set of digital transmission schemes.

#### 3.5 Interfaces

Unbundled Local Loops are available with two—wire and four—wire interfaces, depending on the particular type. The same number of wires will be provided at both the MDF and the End User Interface. For two—wire interfaces, one conductor is denoted Tip and the other is denoted Ring. For four—wire interfaces, the conductors of one pair are denoted Tip and Ring, the conductors of the other pair are denoted Tip 1 and Ring 1.

The interface at the MDF is not accessible by the CLEC. Instead, it is connected to other BST unbundled elements, or it is connected - via tie cabling - to collocated CLEC equipment. The tic cabling is not part of the unbundled loop.

#### 3.6 CLEC Equipment Requirements

In addition to applicable FCC, NEC, and UL requirements and orders, CLEC equipment shall also meet the following requirements:

- The devoltage applied to either conductor shall be negative with respect to ground
- The open-circuit de voltage applied to any conductor shall be less than 80 Vdc when measured to ground or any other conductor.
- The power delivered to a load via BST facilities shall not exceed 2.5 watts.
- The current provided, via BST facilities, shall not exceed 150 mA.

#### 3.7 Right to Disconnect

BST reserves the right to disconnect a service or equipment connected to an unbundled local loop that either: (a) fails to meet these requirements, or (b) is shown to be causing harm to other services or systems.

#### 4. Basic Unbundled Loop

#### 4.1 General

This loop provides a voice grade transmission channel suitable for loop—start signaling and the transport of analog voice grade signals. This loop is typically used to provide switched access telephone service.

This loop provides loop-start signaling, arranged for battery-feed by the CLEC and loop closure by the end-user. This loop is only available via a 2-wire interface.

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#### 4.2 Signaling Requirements

In practically all cases employing metallic facilities, the loop resistance (the sum of the resistance of both tip and ring) is less than 1500  $\Omega$ .

In those cases where loop resistance exceeds 1500  $\Omega$ , it will never exceed 2800  $\Omega$ . In these cases, BST cannot meet the prescribed signaling requirements at the End User Interface unless the CLEC provides sufficient voltage at the office end of the circuit. The open circuit tip-to-ring do voltage provided by the CLEC equipment shall be less than 80 Vdc.

Except for this potentially greater loop resistance, the requirements in 6.2 apply to the Basic Unbundled Loop.

#### 4.3 Transmission Requirements

In those rare cases where the loop resistance exceeds 1500  $\Omega$ , the insertion loss at 1 kHz, measured with a 900  $\Omega$  termination at the MDF and a 600  $\Omega$  termination at the End User Interface will never exceed 15 dB. Except for this potentially greater loop loss, the transmission requirements of Section 7 apply to the Basic Unbundled Loop.

#### 4.4 Signal Power Requirements

The signal power requirements for the Designed Unbundled Voice Loop, with the loop-start option, apply to the Basic Unbundled Loop.

#### 4.5 Asymmetric Digital Subscriber Line

On some Basic Unbundled Loops the CLEC may employ Asymmetric Digital Subscriber Line (ADSL) technology to provide Data Over Voice service. This option is not available when DLC is a part of the Basic Unbundled Loop facility. In addition, due to stringent transmission requirements, this option may not be available on many metallic loops. Variation in vendor implementations of ADSL technology and expected data rates proclude BST from specifying those loops which will support ADSL. However, Section 8.4.3 transmission requirements associated with High - Bit - Rate Digital Subscriber Lines (HDSLs) can be considered broad loop screening criteria for potential ADSL applications.

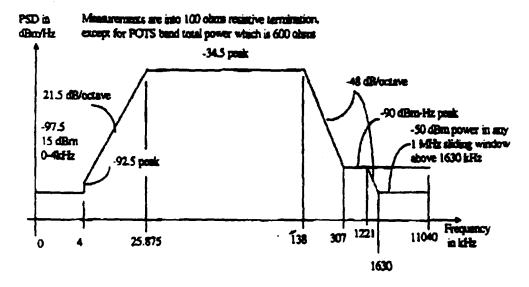
If ADSL is employed, crosstalk into other cable facilities is a concern. Accordingly, the CLEC is responsible for limiting the Power Spectral Density (PSD) of the signal transmitted at both the End User interface and at the MDF interface. The following requirements shall be met to minimize interference to other systems:

- The "downstream" data path, as defined in ANSI T1.413, shall be in the MDF-to-NI direction.
- The "upstream" data path shall be in the NI-to-MDF direction
- The PSD shall be limited to that specifed in Figures 1 and 2.1

<sup>&</sup>lt;sup>1</sup> These limits will soon become a part of ANSI T1.413.

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## Upstream Trunsmitter spectrum



Note: The breakpoint frequencies and values are exact; the indicated slopes are approximate

Note: The power in a 1 MHz sliding window is measured in 1 MHz benowidth starting at the reseasurement frequency

FREQUENCY BAND, LHZ	EQUATION FOR LINE, dBm/Hertz
0-4	-97.5, +15 dBra 0-4 kHz
>4 - 25.875	-92.5 + 21.5*log (U4)/log(2)
25.875 - 138	-34.5
138 - 307	-34.5 - 48°log(\$138)Aog(2)
307 - 1221	-90
1221 - 1630	-90 - 48°log(\$\frac{9}{1221} \text{/log(2)}
1630 - 11040	-90,
	with -50 dBm power in any 1 MHz sliding window above 1630 kHz

Figure 1 - Upstream Transmitter spectrum (ADSL Applications)